

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) 27 MARCH 2006 (27.03.2006)

Applicant's or agent's file reference  
IP05PCT033

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/004344

International filing date (day/month/year)

16 DECEMBER 2005 (16.12.2005)

Priority date(day/month/year)

11 MARCH 2005 (11.03.2005)

International Patent Classification (IPC) or both national classification and IPC

B01D 35/14(2006.01)I

Applicant

MICROFILTER CO., LTD et al

## 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☐ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION


If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office  
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Facsimile No. 82-42-472-7140

Date of completion of this opinion

27 MARCH 2006 (27.03.2006)

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/004344

**Box No. 1 Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ on paper  
☐ in electronic form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1,2	YES
	Claims	None	NO
Inventive step (IS)	Claims	2	YES
	Claims	1	NO
Industrial applicability (IA)	Claims	1,2	YES
	Claims	None	NO

**2. Citations and explanations :**

**1. Reference is made to the following documents:**

D1) KR10-0367233 B1  
D2) WO 01/83079 A1  
D3) KR20-036715 Y1

**2. Novelty**

The subject matter of claim 1 of the present invention relates to fluid flow interruption means which is disposed in a filter for a water purifier so as to interrupt fluid flow even without using a separate water flow interruption valve when cleaning the inside of the filter or replacing a filtering element arranged in the filter. It comprises an elastic spring; a fluid flow interrupter functioning to controllably open and close the guide passage by force of the elastic spring when the head and the filter body are coupled to and decoupled from each other; at least one through-hole. The subject matter of claim 2 relates to fluid flow interruption means including a bracket having one end which is coupled to an outer surface of the head and the other end which is fastened to a wall.

Document D1 cited in the International Search Report relates to a water purifier comprising : a base plate; one or more filters which are exchangeably adhered to the base plate, wherein the filters have a first end part on which a first fluid port and a second fluid port are formed; and connector means which separately support the first end part of the filters, have a first connector port and a second connector port connected to the first fluid port and the second fluid port of the filters, and is installed on the base plate so that the connector means are rotated between filter using positions and filter exchanging positions on a pivot axis; the support means which is installed on the base plate so that it support the lower part of the filter.

Document D2 relates to a water purifier assuring faster and easier change of a used filter and replacing a used filter without having to shut off a raw water inlet port.

Document D3 relates to a filter cartridge for water purifier or hot-water bidet, switching connector attached thereto and water purifier system with multi filter cartridge using switching connector.

(Continued on Supplemental Sheet)

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient,  
Continuation of:

Claim 1 of the present invention is similar to the support means functioning to controllably open and close the flow passage by force of the compressing spring of Document D1, but composition elements of fluid flow interruption means of Claim 1,2 are slightly different from that of Document D1-D3 cited in the international search report.

Accordingly, the subject matter of claim 1,2 seems to be novel under PCT Article 33(2).

**3. Inventive Step**

Claim 1 of the present invention and Documents D1 cited in the International Search Report are similar regarding fluid flow interruption means functioning to interrupt fluid flow without using a separate water flow interruption valve. Particularly, fluid flow interruption means of the present invention is similar to the support means functioning to controllably open and close the flow passage by force of the compressing spring of Document D1. Fluid flow interruption means including a bracket of the Claim 2 is different to the support means of Document D1.

Thus, Claim 1 of the present invention is very easily modified from the reference Document D1 by the skilled person in the art.

Therefore, claim 1 does not meet the criteria set out in PCT Article 33(3). But claim 2 is considered to involve an inventive step under PCT Article 33(3).

**4. Industrial Application**

The subject matter of claims 1, 2 is considered to be industrially applicable under PCT Article 33(4).